

Project Baseline Summary Report

Data Source: **EM CDB**
Operations/Field Office: **Savannah River**
Site Summary Level: **Savannah River Site**
Project **SR-HL05 / Vitrification**

Report Number: **GEN-01b**
Print Date: **3/9/2000**
HQ ID: **0040**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

THE SCOPE OF WORK DESCRIBED IN THIS PROJECT IS WRITTEN FOR FUNDING AT THE PLANNING LEVEL. DWPF receives pretreated, high level waste from ESP and eventually from the salt processing facility and converts it, in a process called vitrification, to a stable form for safe long-term disposal. "Vitrification" is a highly complex process in which liquid high level radioactive waste is mixed with glass frit, heated to 2100 degrees F to form molten glass, and poured into stainless steel canisters. When cooled, the waste has been immobilized within the glass structure and will not dissolve or leach out to the environment. Stringent quality controls insure the glass meets Federal Repository specifications. All DWPF work is done remotely or with shielding due to the intense radiation fields. Filled canisters are stored onsite pending shipment to a Federal Repository.

DWPF activities include 24-hour operation of the vitrification facilities including manning control rooms; receiving transfers of sludge waste and radionuclides from salt processing and making transfers of recycle waste to H-Tank Farm; sampling and adjusting feed for the glass melter; glass melter operation, pouring the glass into stainless steel canisters, sealing and decontaminating the canisters, and transporting them to the Glass Waste Storage Building; performing critical maintenance activities; and analyzing samples to confirm that waste glass quality meets Federal Repository standards.

DWPF melters are projected to have a service life of two and a half years regardless of the canister production rate. Twelve melters are projected over the life of the program. Failed melters are placed in specially designed storage boxes and stored in a Failed Equipment Storage Vault (a seismically qualified, underground concrete vault).

Technical Approach: The key technologies used in vitrification include the following: chemical additions (to conduct precipitate hydrolysis, separate and collect mercury, separate and collect organics, and adjust waste composition); concentration (to achieve the desired mass balance of waste components); analytical analysis (to determine chemical compositions and to confirm that the waste has met stringent quality specifications); vitrification (to immobilize the waste in a glass matrix so it will not leach into the environment during future storage); decontamination (to remove contamination from the external surfaces of filled canisters prior to storage); upset resistance welding (to seal a plug in the top of filled canisters); ventilation (to remove flammable gases from process vessels and to remove radionuclides from process off-gases); heating and cooling (to control process reactions).

Key technology development needs include developing analytical methods to improve process attainment; upgrading DWPF liquid level and density measurement techniques; developing alternate recycle methods; optimizing the amount of waste that can be "loaded" in the glass; and developing canister decontamination alternatives.

Note: the EPA has determined that vitrification is the Best Demonstrated Available Technology (BDAT) for treating liquid, high-level waste.

Project Status in FY 2006:

By the end of FY06, DWPF will have produced 2,130 canisters of waste glass (approximately 37% of the estimated 5,700 total canisters that will be produced over the life of the project).

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Post-2006 Project Scope:

From FY07-26, DWPF is scheduled to produce 200 canisters of waste glass per year until the last two years when processing salt only feed. By the end of FY26 DWPF will have vitrified the last of the SRS liquid, high-level waste, filling an estimated 5,700 total canisters over the life of the DWPF project. All processing will have ceased and all melters and failed equipment will be stored in Failed Equipment Storage Vaults. Disposition is covered by High Level Waste Facilities Disposition (SR-FA24).

Project End State

The project will be completed by the end FY26 when vitrification of all SRS liquid, high-level radioactive waste is complete and the DWPF facility has been de-inventoried. Disposition is covered by High Level Waste Facilities Disposition (SR-FA24).

Cost Baseline Comments:

Outyear cost baseline estimates use FY01 as the base year, adding escalation and adjusting for the following major programmatic changes. Canister production is scheduled to remain relatively constant at 200 canisters filled each year, so that material, labor and other direct operating costs are generally constant over the life of the program. Melters are scheduled to have a useful life of 2.5 years; and melters, failed melter storage boxes, and failed equipment storage vaults are constructed accordingly. A DCS upgrade to process equipment is scheduled to be constructed from FY01-FY03. The vitrification program is scheduled to end in FY26, with the facility de-inventoried. Disposition is covered by High Level Waste Facilities Disposition (SR-FA24).

Safety & Health Hazards:

DWPF operations involve the vitrification of pre-treated high level waste from Waste Pretreatment, Project SR-HL04, into a solid glass matrix which will not leach waste to the environment. The main radioactive constituents of this waste are Strontium-90, Cesium-137, Plutonium-238, Plutonium-239, and Plutonium-241. This process is housed in a "canyon" building with thick concrete walls to provide shielding from the intense radiation fields of this highly toxic waste. Operations, maintenance and waste handling are done under radiological conditions to avoid direct personnel exposure and prevent contamination. Other hazards include the high temperatures associated with the glass melter, exposure to process chemicals (such as formic acid, nitric acid, and sodium hydroxide) as well as miscellaneous hazards commonly encountered in industrial settings (lifting, tripping, falls, rotating equipment, etc.). These hazards are controlled both through engineering controls (remote operation, hand rails, motor guards, etc.) and through administrative controls (policies and procedures, training, personal protective equipment, etc.).

Safety & Health Work Performance:

All work is performed using a WSRC Integrated Safety Management System (ISMS) approach. The ISMS integrates safety considerations into management and work practices at all levels to accomplish missions while protecting the public, the worker, and the environment. The key elements of the WSRC ISMS are to define the scope of work, identify and analyze hazards associated with the work, develop and implement hazard controls, perform work within controls, and provide feedback on adequacy of controls and continue to improve safety management. The WSRC Integrated Procedures Management System is the primary mechanism for implementing the objective, principles and functions of the ISMS. This system establishes Company-Level, Division-level, and Program-specific procedures consistent with organizational roles, and ensures a consistent, disciplined site-wide approach to safety while performing work.

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PBS Comments:

Funding for DWPF (including supporting projects for replacement melters, melter storage boxes, and Failed Equipment Storage Vaults) is at the level necessary to assure safe management of the liquid high level radioactive waste and to meet an overall system production of 200 canisters per year from FY98-04, 225 canisters in FY05, 250 canisters per year from FY06-14, 200 canisters per year FY15-23, and 72 canisters in FY24. FY99 funding reductions for a related project (SR-HL04 - ITP/ESP/LW Operations) has already resulted in a four year extension of this project. Reductions/further reductions in funding for DWPF or related projects (i.e., Waste Removal Operations and Tank Closure, ITP/ESP/LW, Glass Waste Storage Building, or High Level Waste System Upgrades) would eliminate the mortgage reductions for surveillance and maintenance that can be generated as groups of waste tanks are closed and will delay the schedule, thereby increasing the overall life cycle cost of high level waste immobilization.

DWPF operates under an SCDHEC waste water permit.

The major drivers for this project are:

- Federal Facilities Agreement (FFA) - Executed by the Department of Energy, the Environmental Protection Agency and the South Carolina Department of Health and Environmental Control on January 15, 1993. The initial schedule proposed that liquid high level radioactive waste be removed all 24 of the old style tanks in H and F-Tank Farms which do not meet specified secondary containment and leak detection requirements by 2028. This proposed date, however, has been rejected by the state as not aggressive enough. Negotiations are underway to establish a more aggressive commitment date that will meet regulatory expectations while balancing technical and resource limitations.
- Site Treatment Plan - The Site Treatment Plan for SRS includes the following commitments for DWPF (Vitrification, SR-HL05): "Upon the beginning of full operations, DWPF must maintain an average of 200 canisters of processed glass per year to meet the commitment for the removal of backlogged and currently generated waste inventory by 2028." DWPF operations must be funded at the level necessary to support this production rate.

Baseline Validation Narrative:

This project has completed an internal validation conducted by SRS personnel independent from the project.

General PBS Information

Project Validated?	Yes	Date Validated:	1/29/1999
Has Headquarters reviewed and approved project?	No		
Date Project was Added:	12/1/1997		
Baseline Submission Date:	7/3/1999		
FEDPLAN Project?	Yes		

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	N	N	N	N	N	Y	N	N

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Project Identification Information

DOE Project Manager: H. B. Gnann
DOE Project Manager Phone Number: 803-208-6076
DOE Project Manager Fax Number: 803-208-7414
DOE Project Manager e-mail address: howard.gnann@srs.gov
Is this a High Visibility Project (Y/N): Y

Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS Baseline (current year dollars)	1,419,520	4,266,699	5,686,219	132,235	132,235	124,019	124,019	133,962	127,847	130,902	147,935	150,737	152,564	154,295	165,024	
PBS Baseline (constant 1999 dollars)	1,297,978	2,600,679	3,898,657	132,235	132,235	124,019	124,019	133,962	123,404	121,963	134,209	133,156	131,226	129,226	134,578	
PBS EM Baseline (current year dollars)	1,419,520	4,266,699	5,686,219	132,235	132,235	124,019	124,019	133,962	127,847	130,902	147,935	150,737	152,564	154,295	165,024	
PBS EM Baseline (constant 1999 dollars)	1,297,978	2,600,679	3,898,657	132,235	132,235	124,019	124,019	133,962	123,404	121,963	134,209	133,156	131,226	129,226	134,578	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	166,793	168,221	174,249	176,301	971,791	1,110,283	1,246,711	252,350	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	132,445	130,067	131,186	129,241	658,137	658,149	646,852	114,602	0	0	0	0	0	0	0	0

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	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS EM Baseline (current year dollars)	166,793	168,221	174,249	176,301	971,791	1,110,283	1,246,711	252,350	0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	132,445	130,067	131,186	129,241	658,137	658,149	646,852	114,602	0	0	0	0	0	0	0	0

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	3.60%	3.60%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/1/2024

Current Projected End Date of Project: 9/30/2026

Explanation of Project Completion Date Difference (if applicable):

Due to funding shortfalls in FY00-06, the Vitrification facility must operate 2 additional years.

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	3,981,961	Actual 1997 Cost:	132,235	Actual 1998 Cost:	124,019
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	3,725,707	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			100,594
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	3,826,301				

Project Cost Changes

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Project Reconciliation

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):	363,920	PACE savings including maintenance, training and engineering efficiencies.
Cost Associated with New Scope (+):		
Cost Growth Associated with Scope Previously Reported (+):	180,022	Funding limits in FY00-FY06 results in 2 additional years of operational cost.
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	3,642,403	
Additional Amount to Reconcile (+):	0	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	3,642,403	

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
NOT A MILESTONE			9/30/1998								
NOT A MILESTONE			9/30/1998								
Produce 200 canisters of vitrified high level waste in FY00.	SR-HL05-002		9/30/2000	9/30/2000			Y				
Produce 200 canisters of vitrified high level waste in FY01.	SR-HL05-010		9/30/2001	9/30/2001			Y				
Produce 200 canisters of vitrified high level waste in FY02.	SR-HL05-020		9/30/2002	9/30/2002			Y				
Produce 200 canisters of vitrified high level waste in FY03.	SR-HL05-030		9/30/2003	9/30/2003			Y				
Produce 200 canisters of vitrified high level waste in FY04.	SR-HL05-040		9/30/2004	9/30/2004			Y				
Produce 200 canisters of vitrified high level waste in FY15.	SR-HL05-150		9/30/2015	9/30/2015			Y				

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Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Produce 200 canisters of vitrified high level waste in FY16.	SR-HL05-160		9/30/2016	9/30/2016			Y				
Produce 200 canisters of vitrified high level waste in FY17.	SR-HL05-170		9/30/2017	9/30/2017			Y				
Produce 200 canisters of vitrified high level waste in FY18.	SR-HL05-180		9/30/2018	9/30/2018			Y				
Produce 200 canisters of vitrified high level waste in FY19.	SR-HL05-190		9/30/2019	9/30/2019			Y				
Produce 200 canisters of vitrified high level waste in FY20.	SR-HL05-200		9/30/2020	9/30/2020			Y				
Produce 200 canisters of vitrified high level waste in FY21.	SR-HL05-210		9/30/2021	9/30/2021			Y				
Produce 200 canisters of vitrified high level waste in FY22.	SR-HL05-220		9/30/2022	9/30/2022			Y				
Produce 200 canisters of vitrified high level waste in FY23.	SR-HL05-230		9/30/2023	9/30/2023			Y				
Produce 250 canisters of vitrified high level waste in FY99.	SR-HL05-990		9/30/1999	9/30/1999			Y				
Produce 200 canisters of vitrified high level waste in FY05.	SR-HL05-050		9/30/2005	9/30/2005			Y				
Produce 200 canisters of vitrified high level waste in FY06.	SR-HL05-060		9/30/2006	9/30/2006			Y				
Produce 200 canisters of vitrified high level waste in FY07.	SR-HL05-070		9/30/2007	9/30/2007			Y				
Produce 200 canisters of vitrified high level waste in FY08.	SR-HL05-080		9/30/2008	9/30/2008			Y				
Produce 200 canisters of vitrified high level waste in FY09.	SR-HL05-090		9/30/2009	9/30/2009			Y				

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Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Produce 200 canisters of vitrified high level waste in FY10.	SR-HL05-100		9/30/2010	9/30/2010			Y				
Produce 200 canisters of vitrified high level waste in FY11.	SR-HL05-110		9/30/2011	9/30/2011			Y				
Produce 200 canisters of vitrified high level waste in FY12.	SR-HL05-120		9/30/2012	9/30/2012			Y				
Produce 200 canisters of vitrified high level waste in FY13.	SR-HL05-130		9/30/2013	9/30/2013			Y				
Produce 200 canisters of vitrified high level waste in FY14.	SR-HL05-140		9/30/2014	9/30/2014			Y				
Produce 89 (mostly salt only) canisters of vitrified high level waste in FY24	SR-HL05-240		9/30/2024	9/30/2024			Y				
NOT A MILESTONE			9/30/1998								
NOT A MILESTONE			9/30/1998								
Vitrification Project Completion date	SR-HL05-261		9/30/2026						Y		
Produce 60 salt-only canisters of vitrified high level waste in FY25	SR-HL05-250		9/30/2025	9/30/2025			Y				
Produce 29 salt-only canisters of vitrified high level waste in FY26	SR-HL05-260		3/30/2026	9/30/2026			Y				
Project Start	SR-HL05-001		10/1/1996								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
NOT A MILESTONE										Y	
NOT A MILESTONE										Y	
Produce 200 canisters of vitrified	SR-HL05-002										

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Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
high level waste in FY00.											
Produce 200 canisters of vitrified high level waste in FY01.	SR-HL05-010										
Produce 200 canisters of vitrified high level waste in FY02.	SR-HL05-020										
Produce 200 canisters of vitrified high level waste in FY03.	SR-HL05-030										
Produce 200 canisters of vitrified high level waste in FY04.	SR-HL05-040										
Produce 200 canisters of vitrified high level waste in FY15.	SR-HL05-150										
Produce 200 canisters of vitrified high level waste in FY16.	SR-HL05-160										
Produce 200 canisters of vitrified high level waste in FY17.	SR-HL05-170										
Produce 200 canisters of vitrified high level waste in FY18.	SR-HL05-180										
Produce 200 canisters of vitrified high level waste in FY19.	SR-HL05-190										
Produce 200 canisters of vitrified high level waste in FY20.	SR-HL05-200										
Produce 200 canisters of vitrified high level waste in FY21.	SR-HL05-210										
Produce 200 canisters of vitrified high level waste in FY22.	SR-HL05-220										
Produce 200 canisters of vitrified high level waste in FY23.	SR-HL05-230										
Produce 250 canisters of vitrified	SR-HL05-990										

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Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
high level waste in FY99.											
Produce 200 canisters of vitrified high level waste in FY05.	SR-HL05-050										
Produce 200 canisters of vitrified high level waste in FY06.	SR-HL05-060										
Produce 200 canisters of vitrified high level waste in FY07.	SR-HL05-070										
Produce 200 canisters of vitrified high level waste in FY08.	SR-HL05-080										
Produce 200 canisters of vitrified high level waste in FY09.	SR-HL05-090										
Produce 200 canisters of vitrified high level waste in FY10.	SR-HL05-100										
Produce 200 canisters of vitrified high level waste in FY11.	SR-HL05-110										
Produce 200 canisters of vitrified high level waste in FY12.	SR-HL05-120										
Produce 200 canisters of vitrified high level waste in FY13.	SR-HL05-130										
Produce 200 canisters of vitrified high level waste in FY14.	SR-HL05-140										
Produce 89 (mostly salt only) canisters of vitrified high level waste in FY24	SR-HL05-240										
NOT A MILESTONE										Y	
NOT A MILESTONE										Y	
Vitrification Project Completion date	SR-HL05-261				Y						

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Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description			
Produce 60 salt-only canisters of vitrified high level waste in FY25	SR-HL05-250													
Produce 29 salt-only canisters of vitrified high level waste in FY26	SR-HL05-260													
Project Start	SR-HL05-001			Y										

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
HLW														
Treatment	M3	6,322.00	35,263.00	41,585.00	0.00		0.00	871.00	724.00	581.00	581.00	582.00	582.00	675.00
HLW														
Storage	M3							0.00	0.00	0.00	0.00	0.00	0.00	0.00
HLW														
Canisters	NC	1,900.00	3,578.00	5,478.00	0.00		0.00	250.00	250.00	200.00	200.00	200.00	200.00	200.00
Tech.														
Deployed	Ntd	5.00	0.00	5.00						1.00		2.00	2.00	
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	
HLW														
Treatment	M3	675.00	863.00	863.00	871.00	898.00	898.00	1,519.00	10,530.00	10,994.00	8,958.00	595.00		
HLW														
Storage	M3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

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Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035
HLW													
Canisters	NC	200.00	200.00	200.00	200.00	200.00	200.00	200.00	1,000.00	1,000.00	749.00	29.00	
Tech.													
Deployed	Ntd												
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total			
HLW													
Treatment	M3									41,544.00			
HLW													
Storage	M3												
HLW													
Canisters	NC									5,464.00			
Tech.													
Deployed	Ntd									5.00			

Technology Needs

Site Need Code: SR99-2029

Site Need Name: Alternate DWPF Canister Decon Technology

Focus Area Work Package ID: WT-07-01

Focus Area Work Package: Acceptance Criteria and Canister Storage

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Risk Reduction

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

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Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Savannah River**

Site Summary Level: **Savannah River Site**

Project **SR-HL05 / Vitrification**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0040**

Technology Needs

High Activity Waste Forms and Processes

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00504: -

Y

N

Site Need Code: SR99-2031

Site Need Name: Develop Remote Technology To Improve DWPF Operations

Focus Area Work Package ID: WT-10-01

Focus Area Work Package: Immobilization Enhancements

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Risk Reduction

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00504: -

Y

N

Site Need Code: SR99-2032

Site Need Name: Optimize Melter Glass Chemistry

Focus Area Work Package ID: WT-06-01

Focus Area Work Package: Enhanced Immobilization Productivity

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

High Activity Waste Forms and Processes

400,000

Low

High Activity Waste Forms and Processes

400,000

Low

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00504: -

Y

N

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**
Operations/Field Office: **Savannah River**
Site Summary Level: **Savannah River Site**
Project **SR-HL05 / Vitrification**

Report Number: **GEN-01b**
Print Date: **3/9/2000**
HQ ID: **0040**

Technology Needs

Site Need Code: SR99-2033

Site Need Name: Provide Alternative Processing and/or Concentration Methods For DWPF Recycle Aqueous Streams

Focus Area Work Package ID: TFA-3

Focus Area Work Package: Alternative Paths to In-Tank Precipitation at SRS

Focus Area: TFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cesium Removal Using Crystalline Silicotitanate

Advanced Separations at Savannah River Site

Cost Savings (in thousands of dollars)

Range of Estimate

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00499: -

Y

N

00496: -

Y

N

Site Need Code: SR99-2036

Site Need Name: Develop Second Generation DWPF Melter

Focus Area Work Package ID: WT-06-01

Focus Area Work Package: Enhanced Immobilization Productivity

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Risk Reduction

Technologies

High Activity Waste Forms and Processes

DWPF Melter Pouring Enhancements

Cost Savings (in thousands of dollars)

Range of Estimate

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00504: -

Y

N

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

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Project Baseline Summary Report

Data Source: **EM CDB**
Operations/Field Office: **Savannah River**
Site Summary Level: **Savannah River Site**
Project **SR-HL05 / Vitrification**

Report Number: **GEN-01b**
Print Date: **3/9/2000**
HQ ID: **0040**

Technology Needs

Site Need Code: SR99-2040
Site Need Name: Demonstrate Remote Decommissioning and Disassembly of High Level Waste Processing Equipment
Focus Area Work Package ID: WT-06-01
Focus Area: TFA
Focus Area Work Package: Enhanced Immobilization Productivity
Agree with Technology Link: Y
Benefits (Cost, Risk Reduction, Both): Risk Reduction

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00512: -
00513: -

Y N
Y N

Technology Deployments

Deployment Year

Deployment Status

Planned

Forecast

Actual Date

Technology Name: DWPF Melter Pouring Enhancements
Potential Deployment 2003

Technology Name: DWPF Telerobotic Manipulator
Potential Deployment 2002

Technology Name: DWPF Glass Waste Loading Chemistry
Deployment Commitment 2000

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Savannah River**

Site Summary Level: **Savannah River Site**

Project **SR-HL05 / Vitrification**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0040**

Technology Deployments

		Deployment Year		
<u>Deployment Status</u>		<u>Planned</u>	<u>Forecast</u>	<u>Actual Date</u>
Technology Name:	DWPF Second Generation Melter			
Potential Deployment		2003		
Technology Name:	Robotic Equipment Disassembly			
Potential Deployment		2002		